



Leopold Institute

Research Update

JFSP Project

Providing Scientific Leadership to Sustain Wilderness

Integrating social values in vegetation models via GIS: the missing link for the Bitterroot National Forest

The Issue...

Conflict over fire policy and fuels reduction often stems from perceptions that proposed actions will negatively affect human values associated with the project area. Designing fuel hazard reduction projects that integrate knowledge of what people really care about – in terms of their relationships with particular places - can help reduce conflict and increase trust by allowing explicit consideration of potential consequences of alternative treatments.

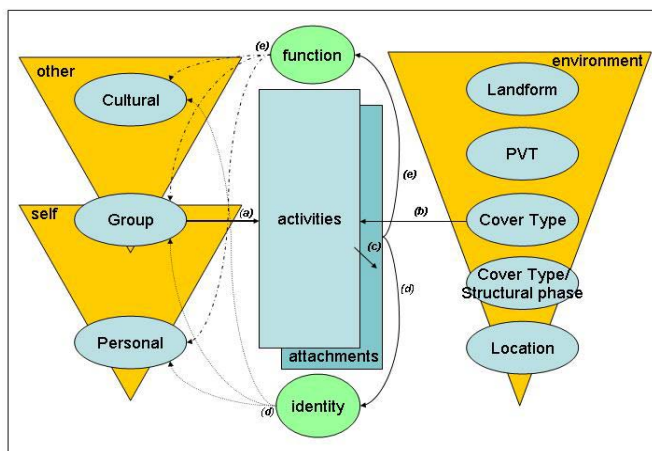


Figure 1. Hierarchical conceptual model linking social values to the biophysical environment. People participate in activities in particular social (a) and environmental settings (b) that form and define attachments (c) to physical places. These activities and attachments develop, reinforce or dismantle notions of identity (who I/we are) (d) and, through various structures (functions that define interactions), influence social cohesion (e). Thus, a given activity in a given setting serves multiple functions for multiple scales of personal and social interaction.

Where We Stand...

We are using our conceptual model to integrate social data into a GIS-based vegetation dynamics simulation model (SIMPPLLE) that is being used to develop fuels treatment alternatives in the Bitterroot Valley of western Montana. Field testing of the data and results are planned for Summer/Fall 2005, and the project will be completed in January 2006. This project has been funded by the Joint Fire Science Program, with additional support from the Bitterroot Ecosystem Management Research Project.

Research Objectives...

- Develop and test an integrated social-ecologic GIS model based on our conceptual model.
- Provide a users guide that managers can follow to replicate the process elsewhere.

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Leopold Institute
RESEARCH APPLICATION PROGRAM
Linking Wilderness Research and Management
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